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Attorney Docket SEL 171

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Kadono et al.

Serial No.: 09/535,233

Filed: March 24, 2000

For: A Method Of Manufacturing A
Semiconductor Device

Art Unit: 2823

Examiner: W. Coleman

Commissioner for Patents
Washington, D.C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:	
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on	December 5, 2002
Rachel Hammerquist	
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RESPONSE D

Sir:

Applicants have the following response to the Office Action dated July 5, 2002, a two month extension of time being separately requested.

The claims of the present application are directed to a method of manufacturing a semiconductor device wherein a second film is formed on a surface of a first film spin etched in order to remove impurities, such as sodium, from the surface of the first film. For example, independent Claims 11, 15 and 19 include the step of removing contaminating impurities from a surface of a semiconductor film or island by spin etching before forming a gate insulating film over the semiconductor film or island. Generally, similar limitations appear in the other independent claims. The claimed method is intended to improve the reliability of the resulting semiconductor device.

The Examiner, however, has the following rejections of the claims.

Rejection of Claims 11-18

The Examiner rejects Claims 11-18 under 35 USC §103 as being unpatentable over Lin et al. in view of Muraoka et al. This rejection is respectfully traversed.

In the Office Action, the Examiner alleges that Lin discloses forming a semiconductor film over a substrate 10. Applicants respectfully disagree. Reference numeral 10 is described in Lin as a semiconductor wafer (see col. 1, ln.44). Lin does not appear to teach that a semiconductor film is formed over a substrate, as required in the claimed invention. Lin merely appears to discuss a method of etching a semiconductor wafer and as a result, does not disclose or suggest the claimed method of the present application.

Further, the Examiner admits that Lin does not disclose forming a gate insulating film after performing a spin etch of the semiconductor film of which the contaminating impurity has been removed, as in the claimed method.

The Examiner then cites Muraoka as allegedly teaching the removal of contaminants deposited on the surface of intermediate semiconductor products, and then alleges that it would have been obvious to combine these two references to arrive at the claimed invention.

However, Applicants respectfully submit that Muraoka does not disclose forming a gate insulating film after performing a spin etch of the semiconductor film of which the contaminating impurity has been removed, as in the claimed method. Hence, since neither reference disclose this limitation, even if the references were combined, they would still fail to disclose or suggest the claimed invention. Accordingly, the claims are patentable thereover, and it is respectfully requested that this rejection be withdrawn.

Rejection of Claims 13, 14, 17 and 18

The Examiner also rejects Claims 13, 14, 17 and 18 under 35 USC §103 as being unpatentable over Lin et al. in view of Muraoka et al. and further in view of Araujo. This rejection is also respectfully traversed.

For substantially the same reasons as discussed above, these dependent claims are also patentable over the cited references. Accordingly, it is requested that this rejection now be withdrawn.

Rejection of Claims 19, 20, 23, 24, 27 and 28

The Examiner also rejects Claims 19, 20, 23, 24, 27 and 28 under 35 USC §103 as being unpatentable over Lin et al. in view of Muraoka et al. and Yoshikawa. This rejection is also respectfully traversed.

For substantially the same reasons as discussed above for Claims 11-18, Lin and Muraoka do not disclose the method of Claims 19, 20, 23, 24, 27 and 28. As Yoshikawa is not cited for this feature, the method of these claims is not disclosed or suggested by the cited references. Accordingly, it is requested that this rejection also be withdrawn.

Rejection of Claims 21, 22, 25, 26, 29 and 30

The Examiner also rejects Claims 21, 22, 25, 26, 29 and 30 under 35 USC §103 as being unpatentable over Lin et al. in view of Muraoka et al. and Yoshikawa et al. and further in view of Araujo et al. This rejection is also respectfully traversed.

For substantially the same reasons as discussed above, these dependent claims are also patentable over the cited references. Accordingly, it is requested that this rejection now be withdrawn.

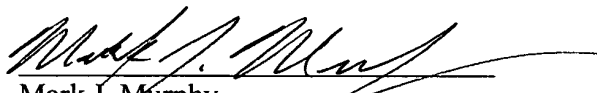
Therefore, the claims of the present application are patentable over the cited references and should now be allowed.

Please charge Deposit Account No. 50-1039 for any fee for this submission.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

Date: December 5, 2002


Mark J. Murphy
Registration No. 34,225

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
200 West Adams Street
Suite 2850
Chicago, Illinois 60606
(312) 236-8500